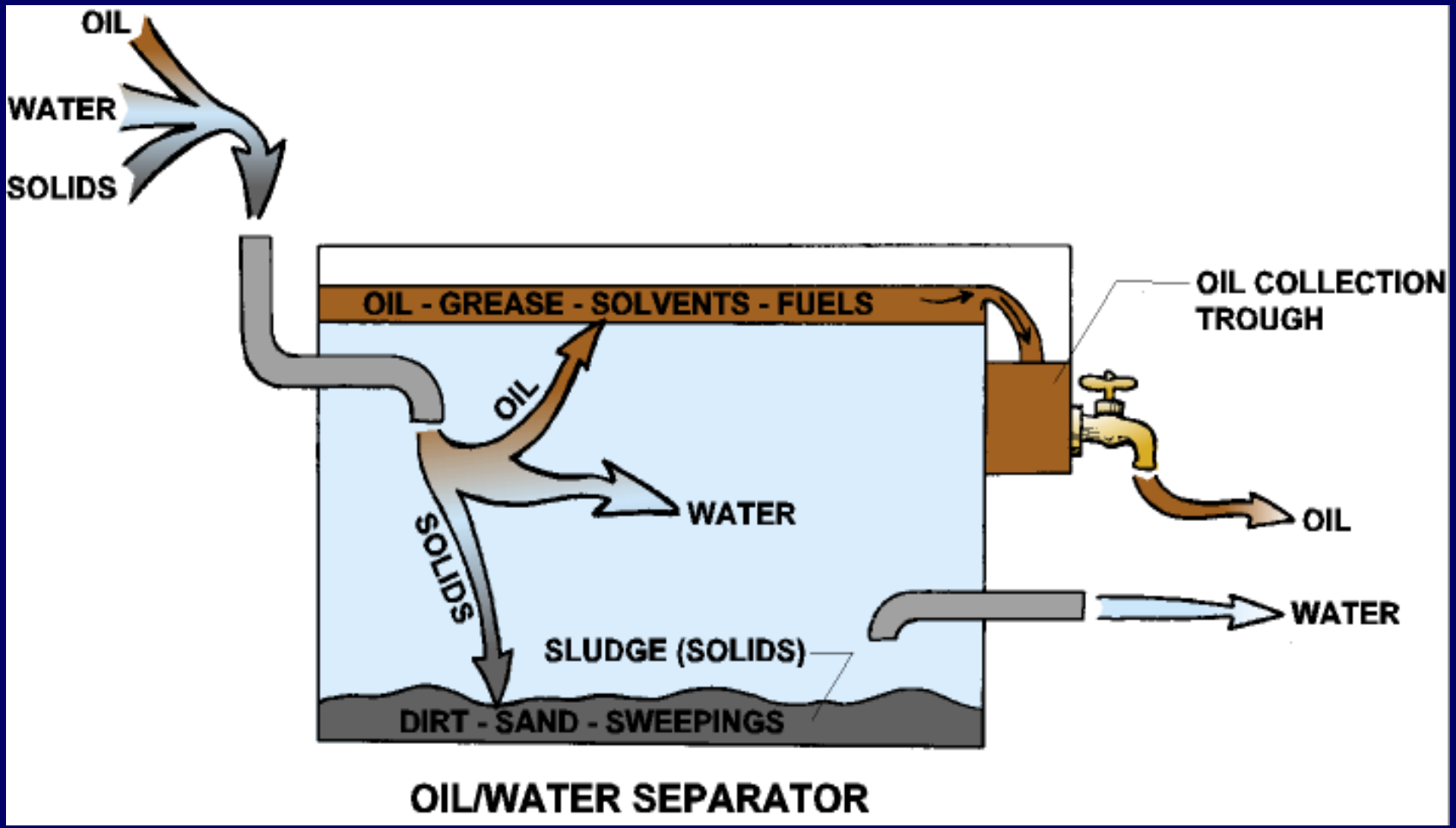
Unit 9
Oil/Water Separators

What is an OWS?



Making It Work

- Reduce your disposal costs
- Reducing your permit and regulatory requirements
- Reducing your service intervals

P2 Alternative: OWS BMPs

MINIMIZE

- **Solids: sediments, trash, sand**
- **Contaminants: antifreeze, fuel, solvents, paint**
- **Wastewater, storm water, wash water**

INSPECT

Bioremediate

Minimize Solids: Grates and Screens

Minimize Contaminants

- Eliminate or minimize floor drains
- Use “dry” cleanup techniques
- Be aware of potential contaminant sources
  - antifreeze - paints - oils
  - solvents - fuels
- Heavy vs. light contaminants
- Avoid emulsifying detergents

Minimize Wastewater

- Mitigate introduction of storm water with berms and washrack covers.
- Reroute roof drains and condensate from air conditioning and air compressors
- Use high-pressure, low-volume sprays for vehicle washing

Inspection and Clean Out

- **Implement regular inspection**
  - **Sludge depth**
  - **Floating oil**
  - **Contaminants (odors, sheens)**
  - **Solids on grates**
- **Perform regular cleanout**
  - **Determine need for cleanout based on inspection, not calendar**
  - **Remove oil from collection trough or from surface using reusable absorbent pads**
  - **Refill OWS with water before returning to service**

Making Bioremediation Work

- Periodic “microbe dosing” of OWS replenishes microbe population
- Keep pH level < 8.5
- Harsh chemicals can kill microbes
- Vendors can provide equipment, microbes, and labor as part of service agreement ($75 to $130 per month)

Case Study 1: Salem Boys

Challenge: Reduce $1,000 cost of OWS cleanout incurred every 3 months

Approach:

- **Install screens and 1/4” expanded steel mesh to existing OWS grates**
- **Use pigs and sloping pavement to settle out sediment**
- **Use “oil-only” absorbent pads to collect floating oil from OWS water surface**

Case Study 1: Salem Boys

- Dose OWS with microbes every 4 hours (service costs $75 per month)
- Use removable screens in vehicle bay to remove debris

Case Study 1: Salem Boys

Results:

- ✓ **reduced cleanout frequency by 75% - from once every 3 months to once/year**
- ✓ **saved approximately $3,000/year in sludge cleanout and disposal**
- ✓ **microbe dosing costs $900/year**
- ✓ **debris grates and absorbents cost $250/year**

Case Study 2: USPS

Huntington Beach, CA

- **Discharge violations**
- **80% reduction** of effluent hydrocarbons with bioremediation

Take Home Messages

- Understand how your OWS works
- Source reduction and segregation
- Bioremediation works
- Save $$ by reducing clean-out frequency and violations